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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,639	03/03/2000	Tatsuo Enami	VX002097	5836

7590 08/26/2003  
Varndell & Varndell, PLLC  
106-A South Columbus Street  
Alexandria, VA 22314

EXAMINER

ZAHN, JEFFREY N

ART UNIT PAPER NUMBER

2828

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A 1x

**Office Action Summary**

Application No.

09/518,639

Applicant(s)

ENAMI ET AL.

Examiner

Jeffrey N Zahn

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 July 2003 and 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**


- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

  
PAUL IF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

## **DETAILED ACTION**

### ***Claim Objections***

Claim 12 is objected to because of the following informalities: Claim 12 ends in a period after the term "valve" on page 3 of Paper No. 14, submitted to the USPTO on 12 June 2003. Page 4, first two lines, of Paper No. 14 states "the buffer gas mainly contains He and, Xe is added to the laser gas.—" It appears that the Applicant intended to include the page 4 limitations in Claim 12; however, this is not a certainty. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Regarding Claim 8 and all claims that depend therefrom, this claim is indefinite because it is unclear/vague as to what is being claimed. The Applicant has recited an "ArF excimer laser" within the preamble of the claim but does not provide any structure and structural relationships to support an "ArF excimer laser." The body of the claim recites only the gases used in a closed group fashion, i.e. "consisting"

Regarding Claim 10 and all claims that depend therefrom, there are no positive limitations recited within this claim. This claim only includes a preamble and a "wherein

clause” which attempts to claim an ArF excimer laser and buffer gas, etc.” The term “comprising”, “consisting”, etc. is not present within the claim. Consequently, it is unclear where the preamble of the claim ends and the body of the claim begins.

Regarding Claim 12 and all claims that depend therefrom, 1) it is unclear/vague how the third valve is positioned within the claimed device. 2) The Applicant has claimed “a xenon gas piping for connecting the xenon gas piping.” This is unclear and vague as to what is being claimed; it seems the same name is being used for two independent structural elements. 3) It is unclear what “a pressure gauge for measuring a pressure arranged within a mixture piping defined by the first valve, the second valve and the third valve.” What pressure is being measured? The term “arranged” is indefinite because it does not specify how the gauge is arranged. Is the mixture piping limited to only three valves or is “defined” an open ended term that is equivalent to “comprising” or “including”? 4) The phrase “the buffer gas mainly contains He and, Xe is added to the laser gas.—” is unclear and vague. Assuming these limitations are part of Claim 12, “the buffer gas” has no antecedent basis. In addition, the Applicant has not recited within the body of the claim any structural relationships of the “buffer gas” to other structural elements. How is the buffer gas connected to the claimed invention? What functionality does the buffer gas provide to the claimed laser? and 5) the Applicant has recited a “laser device” within the preamble of the claim but does not provide any structure and structural relationships to support a “laser device.” The Applicant needs to claim structure and structural relationships within the body of the claim to support the laser recited in the preamble.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bedwell (US 5090020).**

Regarding Claims 8, 10 and 12, and all claims that depend therefrom, Bedwell discloses an ultraviolet/excimer laser device which causes an electric discharge between discharging electrodes to excite a laser gas (implicit of excimer laser) consisting of a halogen gas (col. 3, line 39- 52), a rare gas (col. 3, lines 39- 52), and a buffer gas (col. 3, lines 39- 52), and oscillates a narrow-banded laser light (abstract; excimer laser). In addition, Bedwell discloses an ArF excimer laser that includes a laser gas mixture that contains 99% Helium as a buffer gas.

Regarding Claim 12, in addition to the discussion above, Bedwell discloses an ArF ultraviolet/excimer laser comprising:

- a xenon gas cylinder in which xenon is sealed (col. 3, line 10- col. 5, line 15);
- an ultraviolet laser gas cylinder in which the gas for ultraviolet laser is sealed (col. 3, line 10- col. 5, line 15);
- an ultraviolet laser gas supply piping connecting the ultraviolet laser gas cylinder and the chamber (col. 3, line 10- col. 5, line 15; inherent feature of excimer laser);

a first valve (14) disposed in the ultraviolet laser gas supply piping (14);  
a second valve (18) disposed in the ultraviolet laser gas supply piping between the first valve and the ultraviolet laser gas cylinder.

For the reason discussed above regarding 35 U.S.C §112, para 2, rejections based on the indefiniteness of the claims, the following language of this claim is not given patentable weight for purposes of this examination:

a xenon gas piping for connecting the xenon gas piping and the ultraviolet laser gas supplying piping between the first valve and the second valve;  
a third valve disposed in the xenon gas piping; and  
a pressure gauge for measuring a pressure arranged within a mixture piping defined by the first valve, the second valve and the third valve.

### ***Response to Arguments***

Applicant's arguments with respect to claim 8-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey N Zahn whose telephone number is 703-305-3443. The examiner can normally be reached on M-F: 8:30-5:00 pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

 8/21/03  
Jeffrey Zahn

  
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